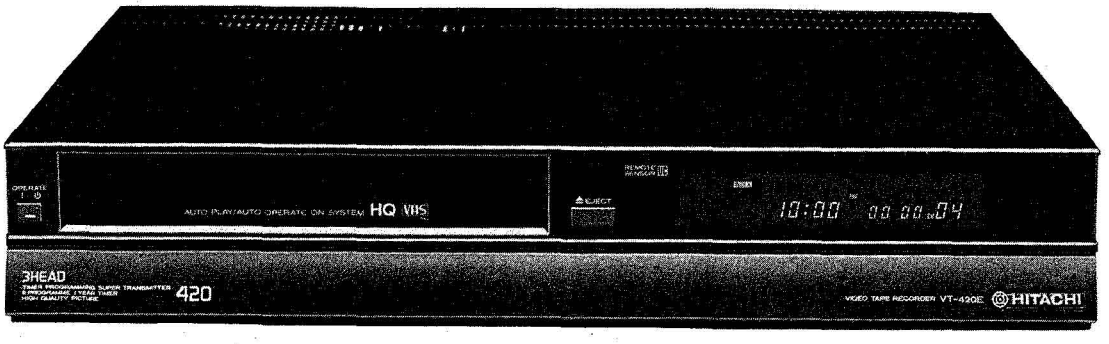
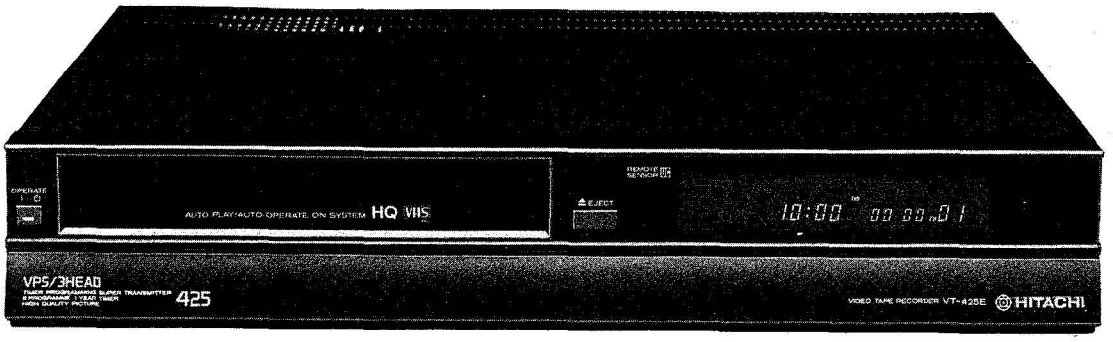
HITACHI VIDEO DECK

VT-420E(CT)/VT-425E(VPS)



VT-420E(CT)



VT-425E(VPS)

Instruction manual page 2
To obtain the best performance and ensure years of trouble-free use, please read this instruction manual completely.

Bedienungsanleitung Seite 24
Bitte lesen Sie diese Bedienungsanleitung aufmerksam durch, um durch richtige Bedienung jahrelangen und störungsfreien Betrieb zu gewährleisten.

Mode d'emploi page 48
Des performances optimales et un fonctionnement à long terme seront assurés en appliquant les présentes instructions après avoir entièrement lu ce mode d'emploi.

Gebruiksaanwijzing pagina 72
Lees deze gebruiksaanwijzing aandachtig door voor het verkrijgen van de beste prestaties en jarenlang probleemloos gebruik.

Bruksanvisning Sidan 96
Läs denna bruksanvisning noggrant för att få ut det bästa ur apparaten och många års bekymmersfri användning.

Manuale di istruzioni pag. 120
Per garantire la migliore prestazione e la più lunga durata leggere attentamente e al completo le seguenti istruzioni.

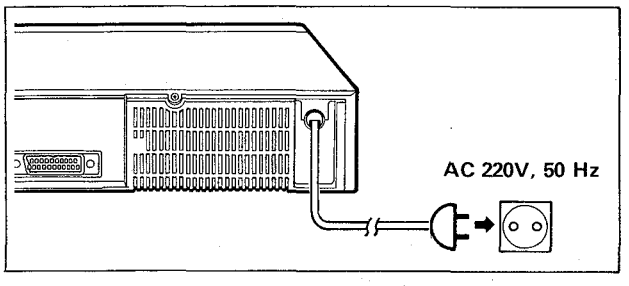
Manual de instrucciones página 144
Para obtener el mejor funcionamiento y asegurar años de uso libre de problemas, lea cuidadosamente este manual de instrucciones.

VHS
PAL

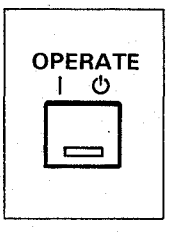
ENGLISH

WARNING

- **Mains supply: AC 220V, 50 Hz only**



The OPERATE switch located on the front panel of the VTR switches the VTR to on and off, leaving the clock/timer facility unaffected.
As to the indication of the OPERATE switch, "I" shows ON and " ⏻ " shows electrical power stand-by.



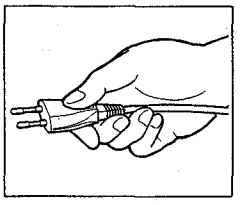
If the unit is to be left unattended for a long period and it is not intended to use the timer recording function, it is recommended that the unit be completely switched off and the plug removed. If you intend to record during your absence, remember there is no necessity for the TV receiver to be switched on.

- Do not remove panel covers by unscrewing. There are no user serviceable parts inside. Refer all servicing to qualified service personnel.
- To prevent fire or shock hazard, do not expose this unit to rain or moisture.
- It is permissible to record television programmes only in the event that third party copyrights and other rights are not violated.
- Note for colour broadcasting system
  1. This unit can receive programmes which are broadcasted in the GDR, and record and play back colour television signals.
  2. When the cassette recorded in above 1 is played back on a SECAM or PAL recorder, a black and white picture will be played back.
  3. When a cassette recorded on a SECAM recorder or a SECAM prerecorded cassette is played back by this unit, a black and white picture will be played back.
  4. This unit cannot be used in France. Please use a SECAM recorder there.

PRECAUTIONS

On Safety

- Should any solid object or liquid fall into the cabinet, turn off the unit and have it checked by qualified personnel before operating it any further.
- To disconnect the mains lead, pull it out by plug.
  Never pull the lead itself.



On Installation

- Choose a location that air can pass through the ventilation holes in the bottom, top and back of the unit to prevent it from overheating.
- Do not install the unit near heat sources such as radiators or air ducts or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- Never bring a magnet or magnetized object near the VTR because it will adversely affect the performance of the VTR.
- Do not install the unit in an inclined position.
  The unit is designed for operation in a horizontal position.

On Operation

- Moisture condensation
  If you pour a cold liquid into a glass, water vapor in the air will condense on the surface of the glass. This is moisture condensation.
  Moisture condensation on the head drum, one of the most crucial parts of the VTR, will cause damage to the tape.
  The VTR should not be operated for at least 2 hours after being moved from a cold to a hot environment to avoid condensation from occuring on the head drum.

On Cleaning

- Be careful; when the surface of the case is wiped with a volatile agent such as benzine, alcohol, thinner, etc., or a chemically processed cloth, the surface finish may deteriorate or its coating may peel.

On Repacking

- It is wise that you save the packing materials and box in case you ever need to ship or store your unit.

FEATURES

- **High-quality variable slow and still picture — plus visual search and frame advance**
- **Control everything by the LCD timer remote controller**
- **8-Programme/1 year preset recording with memory backup**
- **Automatic controls for easier operation**
  - — Auto Play immediately starts to play a tape without its safety tab
  - — Auto Eject & Auto Tape Canceller eject cassette without its tab when recording
  - — Auto Endless Play repeats playing tape from beginning to end
  - — Auto Repeat quickly rewinds and plays for desired scene
  - — Auto Operate On turns system power on by simply inserting cassette
  - — Auto Rewind/Rewind Shutoff automatically rewinds tape at its end and automatically shuts off at its beginning if the OPERATE switch is pressed.
- **Index function** — convenient locating a desired programme on your tape
- **Multi-function fluorescent display** — convenient confirming almost everything in the large window
- **Video programme system (VPS)** — no chance of missing your programme (Only for VT-425E(VPS), but adaptable for VT-420E(CT))
- **Sharp, finely detailed pictures from High Quality (HQ) picture technology**

  HQ The Video Tape Recorder (VTR) with this marking incorporates VHS high-quality picture technology and is compatible with any Video Tape Recorders bearing the VHS mark.
- **New frequency synthesized tuner provided easy, preset tuning for up to 69 channels plus CATV and Hyper (satellite) reception**
- **Timer display is automatically dimmed when OPERATE is turned off**
- **New instant recording timer (IRT) lets you quickly set the time to start recording and the length of recording time**
- **Memory stop function lets you quickly return to and start playing the scene you have indicated**

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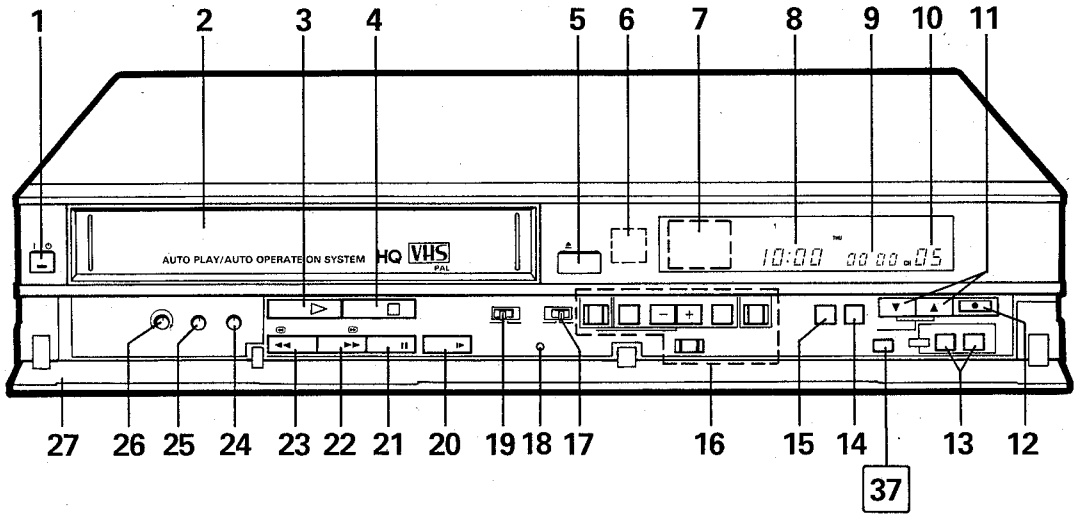
CONTROLS AND FUNCTIONS



1. OPERATE SWITCH
Turn system power on and off.

2. CASSETTE COMPARTMENT
Insert a cassette in through the door, and loading will be completed automatically.
Note: Power is turned on automatically when the cassette is loaded.

3. PLAY BUTTON
Note: When the cassette (with erase prevention tab removed) is loaded, the playback starts automatically.

4. STOP BUTTON
The STOP button must be pressed between "RECORD" and any other operation.

5. EJECT BUTTON
Press to remove cassette.

6. INFRARED RAY RECEIVING SECTION
Receives infrared rays from remote control unit.

7. MODE INDICATORS
- "[cassette]" appears when a cassette is in the compartment.
- "PLAY" appears during the playback mode.
- "REC" appears during the record mode.
- " ◁◁ " appears during the rewind mode and flashes during rewind visual search mode.
- " ▷▷ " appears during the fast forward mode and flashes during forward visual search mode.
- " ▯▯ " appears during the play/record pause mode.
- " ⏲ " appears when turning the power off and either the timer has been programmed or IRT is turned on.
- "INDEX" appears when turning the index function on.

8. DIGITAL TIMER DISPLAY
This normally shows the time and day of the week.

9. DIGITAL DATE/COUNTER DISPLAY
This shows the current date when the VTR power is turned off or shows the tape counter when the VTR power is turned on.

10. CHANNEL INDICATOR DISPLAY
This shows the channel number corresponding to the channel selected.

11. CHANNEL SELECT BUTTONS
Select the channels you wish to view or record by pressing these buttons.
And you can also select the "AU" position* by pressing this button to record or watch the programme input at the EURO jack.
* One channel position either higher or lower outside the range of your preset channels.

12. RECORD BUTTON
Press RECORD button to record.

13. INSTANT RECORDING TIMER BUTTONS (IRT)
This allows unattended recording.
Timer will switch the VTR off automatically at a preselected time. This is convenient when you go out during recording.

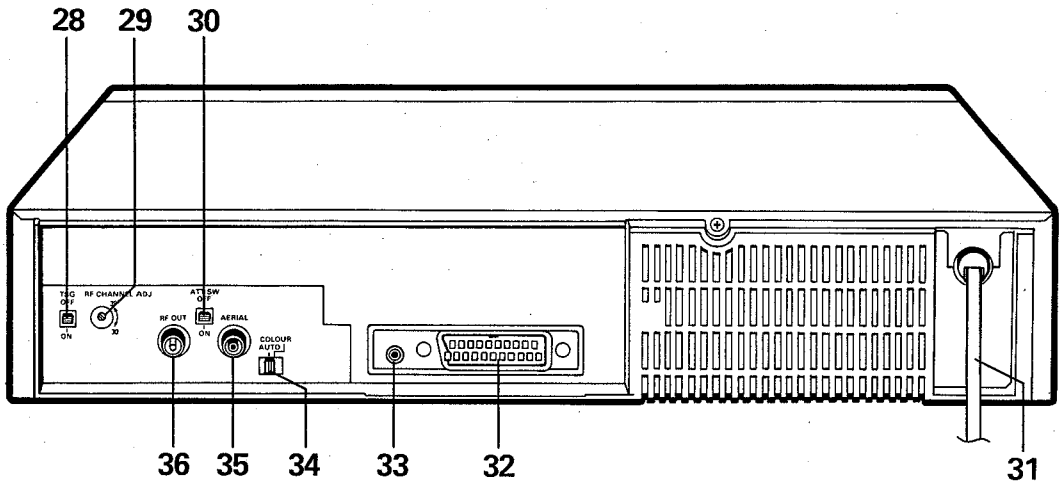
14. MEMORY BUTTON
Press this button so "M" is indicated in the display, then fast forward or rewind the tape. The tape stops when the counter reaches approximately "0000".
Note: Press the button again to switch off the "M" indicator.

15. COUNTER RESET BUTTON
To reset counter to "0000".

16. CLOCK/TIMER/CHANNEL PRESET BUTTONS

17. BUZZER SWITCH
When this switch is on, a beep sound will be heard when any VTR operation button is pressed. This is a convenience allowing you to operation.
To stop this function, turn the switch off.

18. RESET SWITCH
Press this switch if the digital display malfunctions or no operation mode can be engaged to reset the display. Set the correct present time for the clock.



19. EDIT SWITCH
Turn this switch on when using this VTR for playback during dubbing. The dubbed tape will provide clearer pictures. This function does not work when using this VTR for recording.

20. SLOW BUTTON
Press SLOW button during playback, and the tape is played back at slow speed.

21. PAUSE BUTTON
Press to pause during recording.
Press to view a still picture during playback.
Press again to release.

22. FAST FORWARD/VISUAL SEARCH BUTTON
Press to activate fast forward.
Press this button during playback and forward playback picture at high speed can be seen.

23. REWIND/VISUAL SEARCH BUTTON
Press to start rewind.
Press this button during playback and reverse playback picture at high speed can be seen.

24. TRACKING CONTROL
To minimize noise in playback.

25. VERTICAL SYNC. ADJUSTMENT CONTROL
If you see vertical shaking on the TV screen in the still playback mode, rotate this control to minimize shaking.

26. PICTURE CONTROL
Adjust the picture so it is easy to see.

27. SECONDARY CONTROL DOOR

28. TSG ON/OFF SWITCH
Set to ON and check that the video channel of your TV set is correct. After setting, set this switch to OFF.

29. RF CHANNEL CONTROL
Turn TSG ON/OFF switch to "ON" and rotate this control to set the video channel correctly.

30. ATTENUATOR SWITCH
Generally set to the OFF position.
Set to "ON" when interference occurs in an area with a strong signal.

31. MAINS LEAD

32. EURO JACK
For connection with a TV with a EURO or DIN jack using an exclusive cable. See your dealer for details.

33. CAMERA PAUSE JACK
Connect camera pause cable.

34. AUTO/COLOUR SWITCH
AUTO: Circuits are automatically switched to colour or black/white mode. Set to this position when playing or recording PAL signal.
COLOUR: When recording PAL signal in the area very far from broadcasting station, the recorded picture may lose colour. In this case set to this position in recording and playback.

35. AERIAL INPUT SOCKET
Connect external aerial.

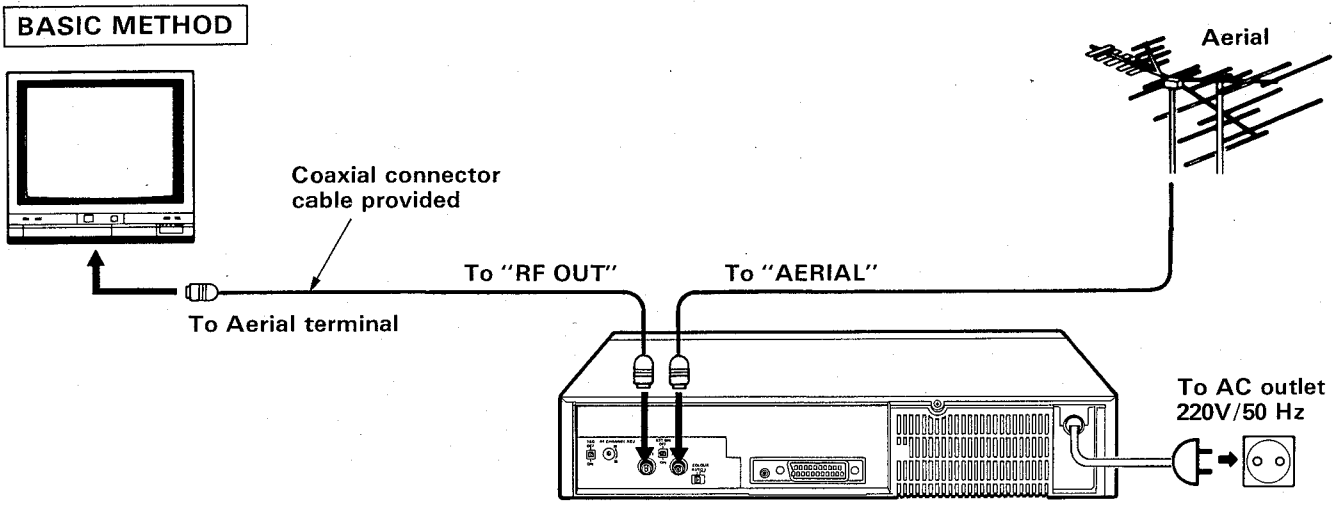
36. RF OUTPUT
Connect to TV aerial input.

37. VPS BUTTON (Only for VT-425E(VPS))

See page 22 for complete information.
NOTE: This button is also provided on the VT-420E(CT) but it is not effective because the VT-420E(CT) does not incorporate a VPS circuit. However, the VT-420E(CT) is adaptable for the VPS function. Consult your nearest dealer.

INSTALLATION

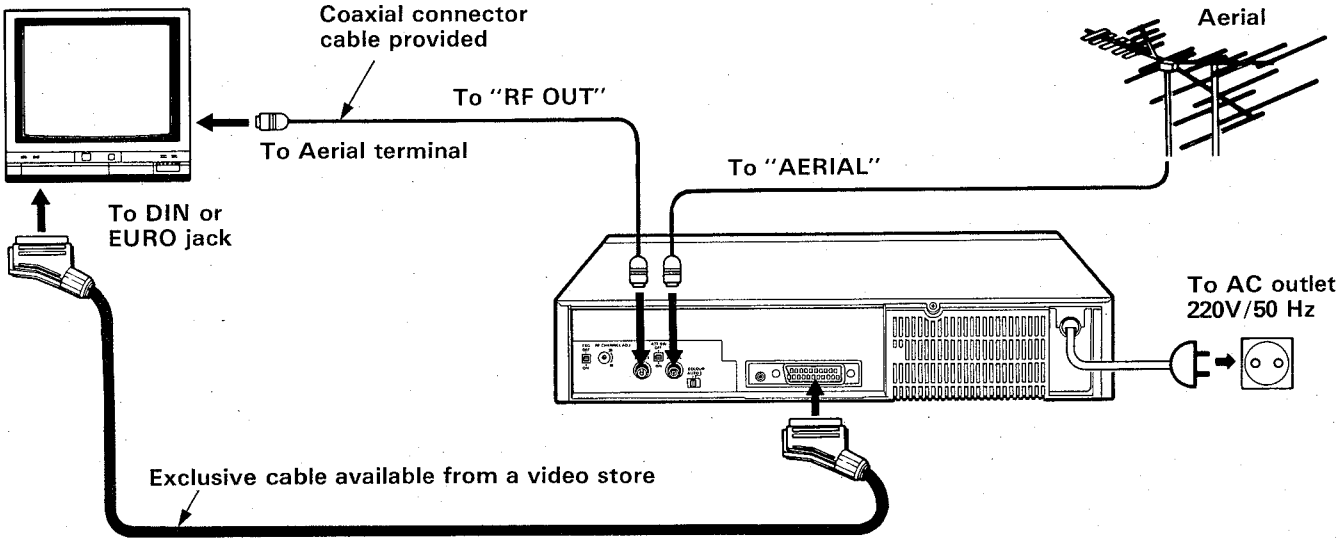
BASIC METHOD



1. Remove the coaxial aerial cable from your TV set. Place this cable into the terminal marked "AERIAL" on the VTR.
2. Connect your TV to the RF OUT terminal with the supplied coaxial connector cable.
3. Plug into the mains.

APPLICATION METHOD

When your VTR is connected to a TV set provided with a DIN or EURO jack, follow the connections below. You can record and playback much better pictures than using the above connections.
You need an exclusive cable available from a video store when you make the following connections.
Note: Some TV sets are not equipped with a DIN or EURO jack. In such cases, you must use the BASIC METHOD for connections.

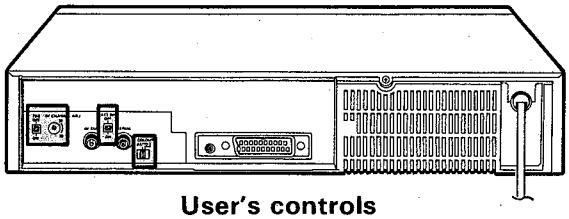


1. Make connections 1 to 3 in [BASIC METHOD].
2. Connect the EURO jack on the rear of the VTR and the DIN or EURO jack of the TV set using the exclusive cable.

With this connection method:
- During playback, the signals from the EURO jack of the VTR are fed to your TV.
- You can record the programme selected by the channel select button of the TV set. In this case, press the CHANNEL select button (forward or reverse) so as to have "AU" indication light up on the VTR display instead of channel number.

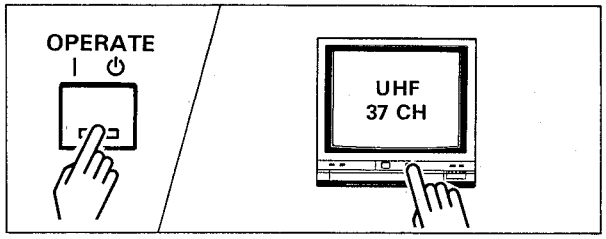
VIDEO CHANNEL SETTING

The RF converter changes the video and audio signals from a previously recorded video tape during playback to the same type of signal used for TV broadcasts. The RF converter output in this unit is pre-set prior to shipment to UHF channel 37.



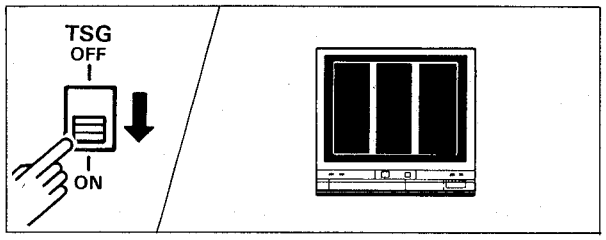
User's controls

1 Turn on VTR and TV, then set TV to UHF 37 channel.



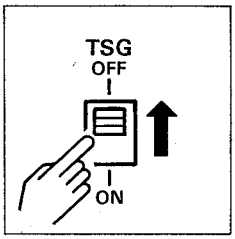
If your TV has channel button marked "A/V", you can use this channel instead of UHF 37 channel.

2 Set the TSG ON/OFF switch to ON.



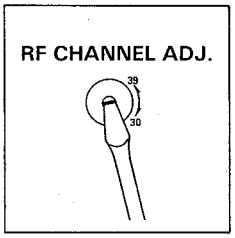
Test pattern appears on the TV screen.
Fine tune your TV until the test pattern is received clearly.

3 After complete adjustment, set the TSG ON/OFF switch to OFF.



NOTE:

If it is not possible to correctly tune to the test pattern or channel 37 is used for broadcasting in your area, adjust the RF converter output with the RF channel control using a small screwdriver and readjust your TV until the test pattern is observed.

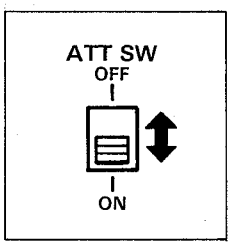


For higher channel numbers, turn counterclockwise.
For a lower channel, turn clockwise.

When connecting the VTR to a TV set provided with auto-tuning and the video channel cannot be set, operate as follows:

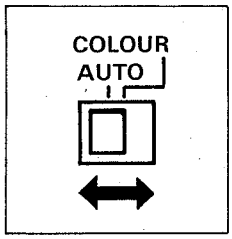
1. Remove the aerial cable from the AERIAL terminal on the VTR.
2. Leave the TSG ON/OFF switch "OFF".
3. Playback a blank tape.
4. Press the PAUSE button to obtain the pause mode.
5. Press the Auto-tuning button of the TV.
6. Auto-tuning starts and it stops at video channel 37.
   Note: The auto-tuning indicator of the TV set changes to an exact tuning indicator.
7. Set the channel memory of the TV to ON and store the channel which was set in item 6.
8. Set the TSG ON/OFF switch to "ON" and check that the picture appears on the TV screen.
   Now, the video channel of TV has been set properly.
9. Return the TSG ON/OFF switch to "OFF".
10. Reconnect the aerial cable to the VTR.

ATTENUATOR SWITCH



The ATTENUATOR switch located on the rear panel of the VTR is used to adjust the reception of the signal from the tuner section.
If the image develops wavy lines during the reception for a broadcast from a local TV station, it may be that the signal reception is too strong.
In this case, set this switch to ON to attenuate the intensity of the signal.
Normally leave this switch in OFF position.

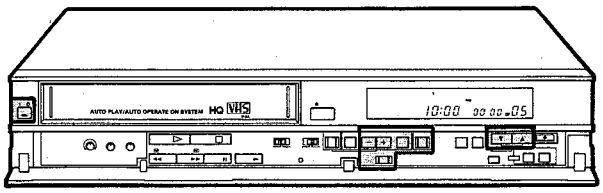
AUTO/COLOUR SWITCH



This switch is located on the back of the VTR.
AUTO: Normally leave the switch in this position for reception and during playback.
COLOUR: When recording PAL signal in the area very far from broadcasting station, the recorded picture may lose colour. In this case, set the switch to this position in recording and playback.

PRE-TUNING OF BUILT-IN TV TUNER

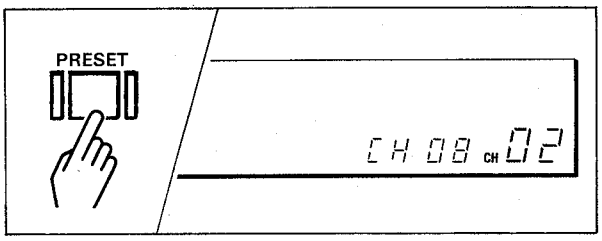
This VTR incorporates a complete television tuner with the required tuning controls. Once you have pre-tuned to preferred stations, you can select any of them by merely pressing the CHANNEL select button.
Before pre-tuning TV stations, set the clock time.



User's controls

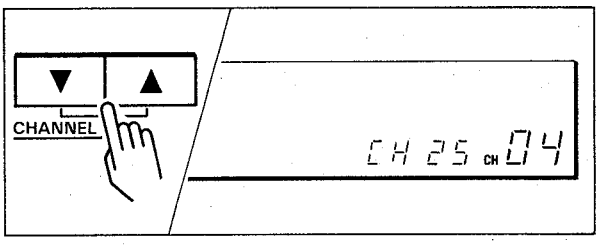
1 Turn on VTR and TV, then set TV to the pre-tuned video channel.

2 Press the PRESET button once.



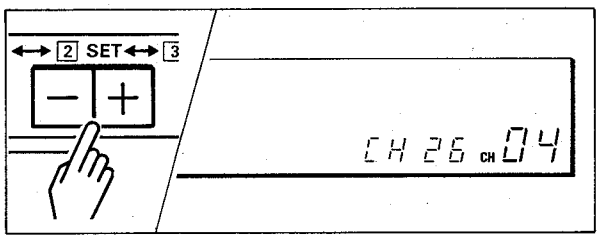
The display indication changes from the clock time display to the band indicator display.
Note: Pressing the button twice will lock the display. If you have pressed it twice, press it once more.

3 Press the CHANNEL select button on VTR to select the channel to be memorized.



For example, the above diagram shows that channel 4 has been selected.
Note: The Channel Number Display can be now consecutively selected from "01" through "69" and "AU" by pressing the CHANNEL select button either upward or downward. In this case, Channel Number may be any number.

4 Press and release the SET button (Forward or Reverse) to start tuning.

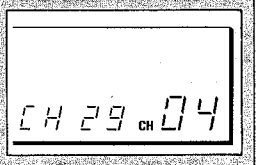


At a station that is broadcasting, the picture appears on the TV screen. If the station received is different from the channel to be preset, press SET button (Forward or Reverse) again.
At the next station, the searching will stop and the new station can be preset. Repeat this until the desired station is reached.

Notes:

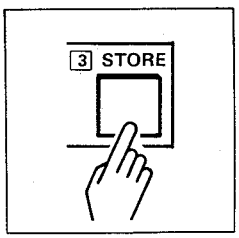
- Press the Forward SET (+) button; channels are scanned in the order VHF (2 — 12) → UHF (21 — 69) → CATV (S1 — S20) → HYPER BAND (S21 — S40) → VHF (U1 — U5); the colon (:) blinks when scanning the CATV and HYPER channels.
- Press Reverse SET (—) button; channels are searched in the reverse order to the above.

VHF (2—12) & UHF (21—69) Channels Direct Preset
Press the 10 key buttons on the remote control unit instead of step 4 to preset desired VHF and UHF channels.



To preset UHF channel 29 in the channel position 04, for example, press the CHANNEL select button to display the channel position "04" (in step 3) then press 2 9 on the remote control unit.

5 Press the STORE button when the desired station is reached.
"——" will be displayed.



Note: If the TV programme of broadcast by a preset channel does not appear clearly, press the Forward or Reverse SET (+ or —) button to fine tune the channel. **After fine tuning is completed, press the STORE button again.**

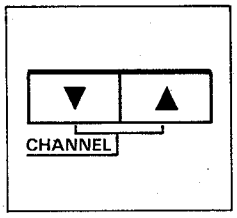
6 Follow the same steps as explained in steps 3 through 5 above for other channels.
You can preset up to 69 channels in memory.

7 After having completed tuning all channel memories you want, press the PRESET button once again.

These channels preset in memory as shown in the above can be selected by the CHANNEL select buttons on the VTR.
The provided sheet is used to list the programmes to which you pre-tune your VTR. List the programmes and paste the sheet on the side panel, etc. so as not to hinder you when you operate the VTR.

Channel selection

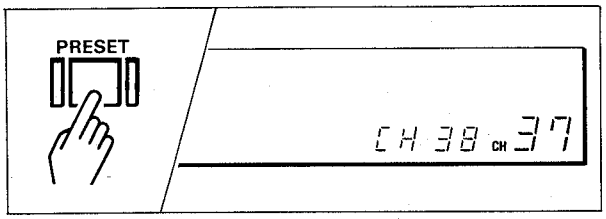
The channel up and down controls on the VTR permit advancing the tuner directly to the next higher or lower programmed channel.



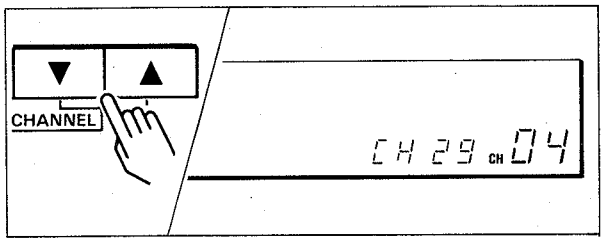
Eliminating unwanted preset channels

You can rearrange the desired channels by eliminating unwanted preset channels for channel up/down tuning.

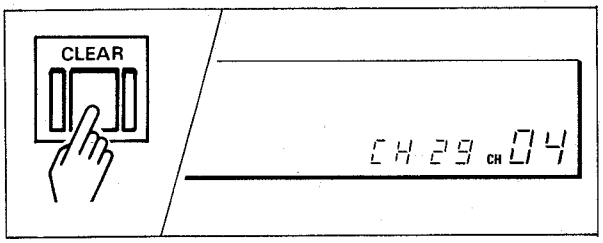
1 Press the PRESET button once.



2 Press the CHANNEL select buttons until an unwanted channel is found.



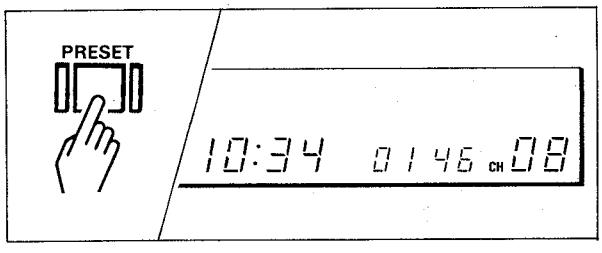
3 Press the CLEAR button once.



Sound will go off indicating the channel has been erased from memory.

4 Repeat steps 2 and 3 until all unwanted channels have been erased.

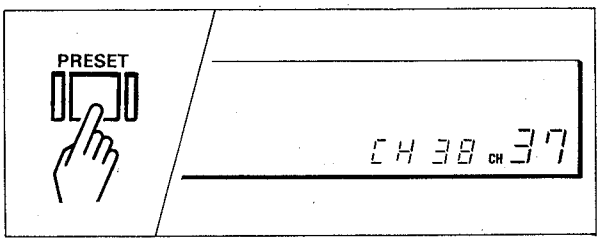
5 After eliminating them, press the PRESET button once again.



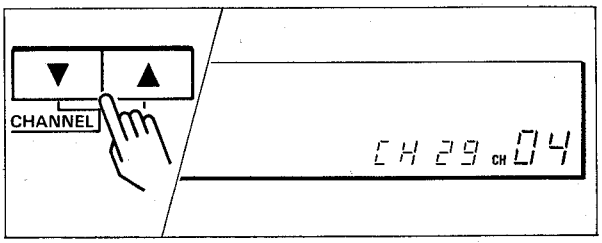
Adding channels

You can preset channels again which have previously been eliminated because they were unwanted.

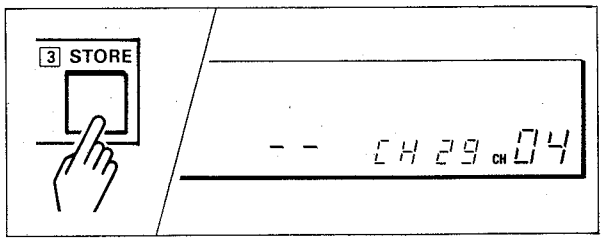
1 Press the PRESET button once.



2 Press the CHANNEL select buttons until the channel which has been previously eliminated and you desire to preset again into the memory.



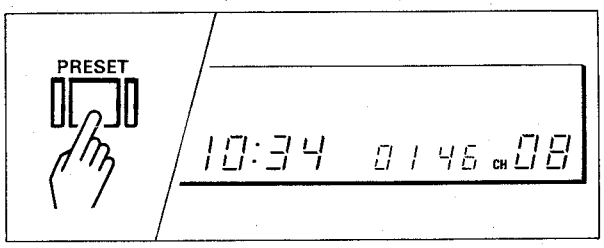
3 Press the STORE button.



Sound will come on indicating the channel has been added in memory.

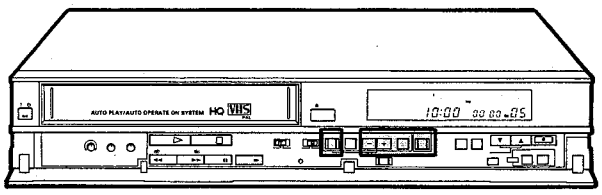
4 Repeat step 2 and 3 for other channels if desired.

5 After adding channels, press the PRESET button once again.



CLOCK TIME SETTING

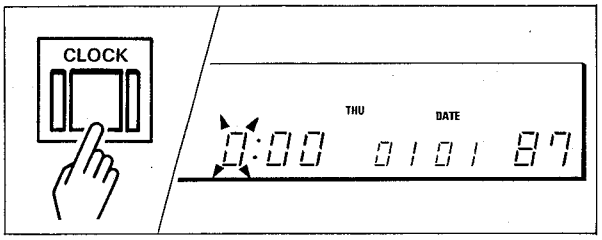
The built-in digital clock is based on a 24 hour cycle and gives you a constant readout of the time and day.
The clock time can also be set with the remote control unit provided. See the supplement manual for operating procedure.



User's controls

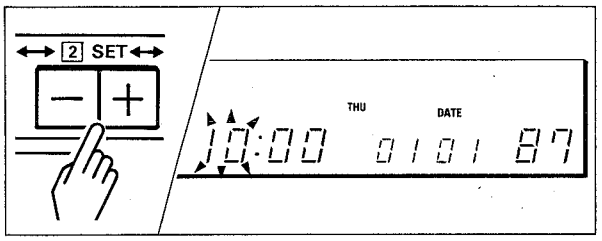
- When the MAINS lead is plugged in for the first time, "—:——" and "DATE —— ——" will appear on the display.

1 Press the CLOCK button.



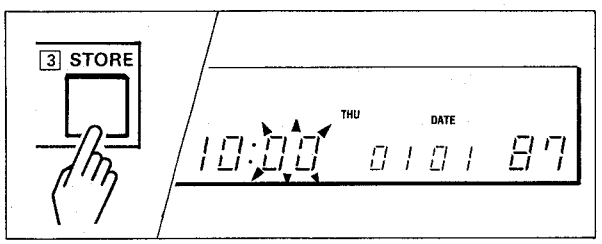
"0" hour starts flashing.

2 Press the SET button (Forward or Reverse) to set the present hour.



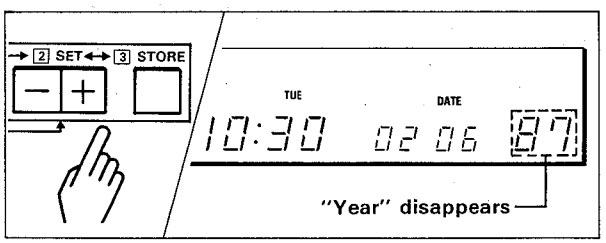
Hold the button down to advance rapidly.

3 Press the STORE button when the present hour appears.
"00" minutes starts flashing.



For example, the diagram shows that "10" hour has been set.

4 Repeat steps 2 and 3 to set minute, day, month and year.



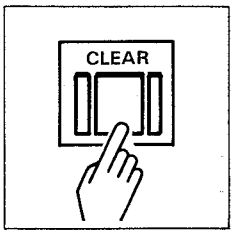
The day of week appears automatically after year has been entered.
Year disappears from the display when the STORE button is pressed.

For example, the diagram shows that 10:30 TUE, 2 of June 1987 have been set.

Now the clock has been set to the correct time and date.

To correct an error during setting

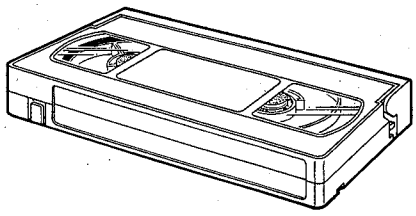
You can correct an error in the setting any time before the last step by pressing the CLEAR button repeatedly until the digit to be correct is flashing. Then enter the correct digit and continue the setting sequence.



Notes:

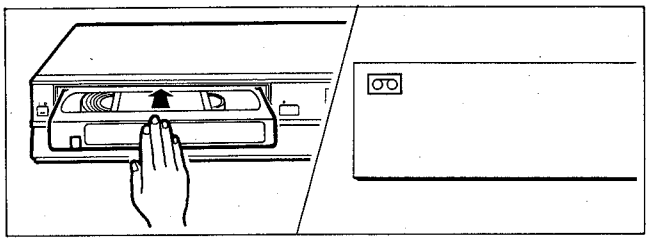
- This VTR has a built-in power failure compensation circuit. If power interruption of less than 15 minutes occurs, the clock time will not be lost.
- The digital display is bright when the OPERATE switch is turned ON and automatically becomes dim when the switch is off.

CASSETTE TAPES



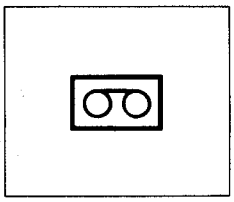
Insertion

Push the cassette through the door until the VTR mechanism pull it into the compartment.



VTR power automatically turns on and the TAPE-IN indicator [ ] turns on when the cassette is in place.

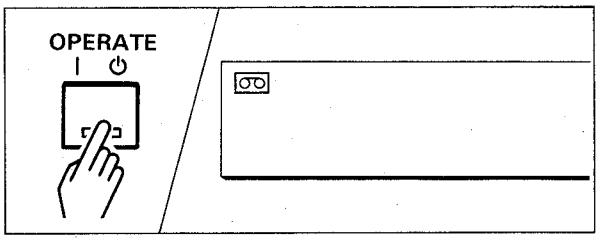
TAPE-IN indicator



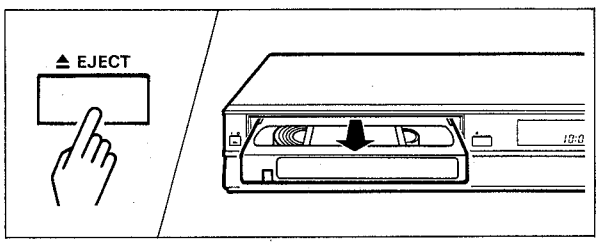
- Will light when the cassette is in the VTR regardless of turning the OPERATE switch on and off.
- Will flash for approx. 5 seconds to notice you to insert a cassette when the OPERATE switch is turned on or the RECORD or PLAY button is pressed if the cassette is not in the VTR.

Removal

1 Turn the OPERATE switch on.



2 Press the EJECT button.

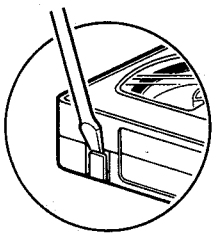


The cassette will come partially out of the compartment so you can pull it out.

- The TAPE-IN indicator [ ] turns off when the cassett is ejected.

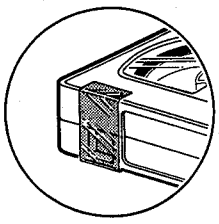
To avoid erasing a recording

Break off the safety tab using a screwdriver or similar tool



To re-record on a cassette which has its safety tab removed

Cover the hole with cellophane tape



Remember that:

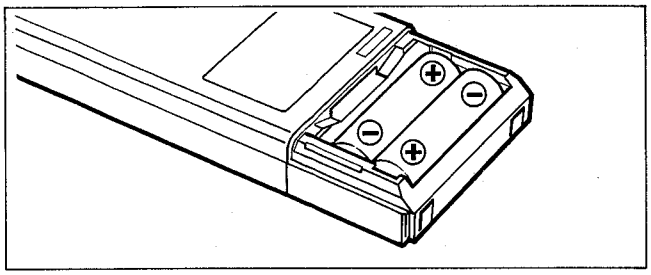
- The VTR automatically enters the playback mode when a cassette without a safety tab is inserted.
- The VTR automatically ejects the cassette if the RECORD button is pressed when the cassette without a safety tab is in the VTR.
- Be sure to check its safety tab before inserting a cassette for above reasons.

REMOTE OPERATION

You can operate the VTR from a distance using the Infrared Remote Control unit which performs the same functions as the corresponding buttons on the VTR.

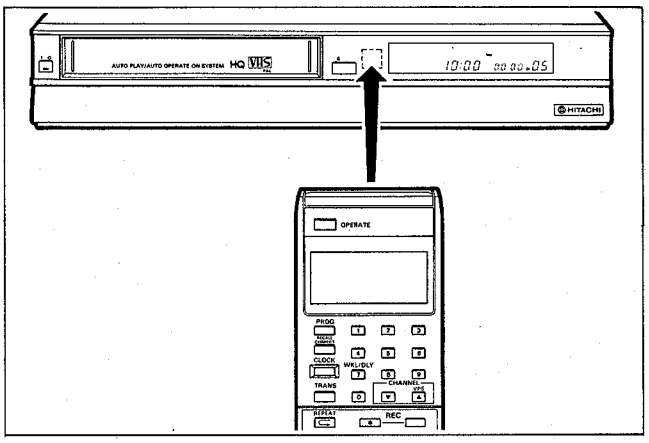
Power source of infrared remote control unit

The infrared remote control unit is powered by two batteries (size IEC standard R6). The life of the batteries is about a year although it depends on the numbers of times the unit is used. Replace the batteries when operation is not possible or when the distance becomes too small.



Operation of remote control

To use the infrared remote control unit aim it at the receiver on the front panel of the VTR.



Controls and function

OPERATE: Same as OPERATE on the VTR. (Turns operate on/off.)

CLOCK/TIME DISPLAY: While setting the clock/timer, this display will prompt you through the procedure. After setting the clock, **the display gives you a constant readout the clock time.**

CLOCK/TIMER PROGRAMME BUTTONS: See the supplement manual for complete inormation.

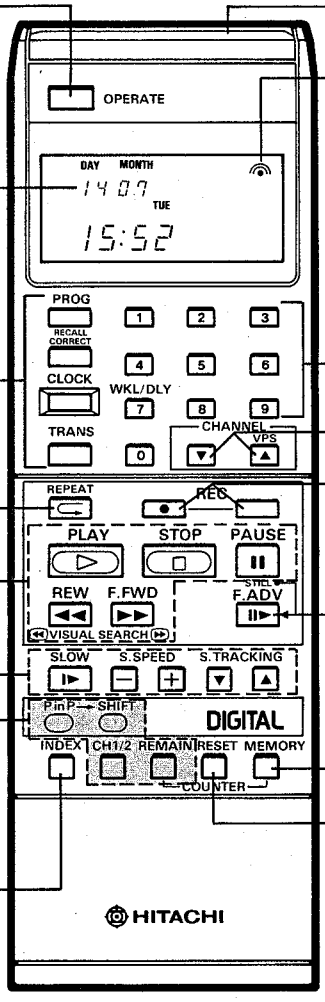
REPEAT: For repeat function. See page 17 for detail.

PLAY/STOP/PAUSE/REW/F.FWD: Same as ones on the VTR.

SLOW/S.SPEED/S.TRACKING: Used for slow motion play. (See page 17 for details.)

These four buttons are disable.

INDEX: Used for INDEX function. See page 17 for complete information.



TRANSMISSION WINDOW

TRANSMITTING INDICATOR: Will light when any button is pressed, and transmit commands from remote control unit to VTR.

10-KEY BUTTON

- Press two numbers to select a channel.
- Also uses for setting the clock and programming the timer.

CHANNEL: Same as CHANNEL on the VTR. (Select next higher or lower channel.)

REC: Press both buttons to start recording.

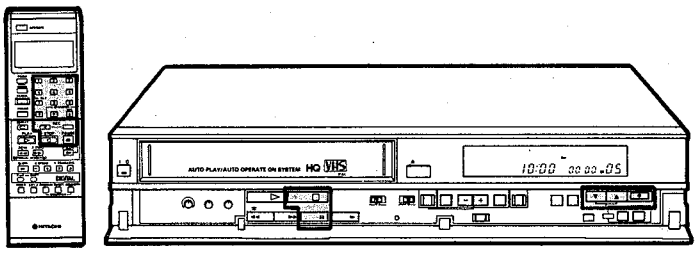
F.ADV: Advance the picture from frame to frame during still playback. See page 16.

MEMORY: Same as MEMORY on the VTR. (Turns counter memory on/off.)

RESET: Same as RESET on the VTR. (Resets tape counter to 0000.)

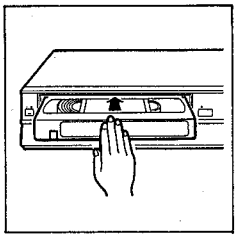
NOTE: The infrared rays will bounce off the walls and eventually reach the receiver on the VTR, but for best results transmit rays directly to the receiver.

RECORDING TV PROGRAMMES

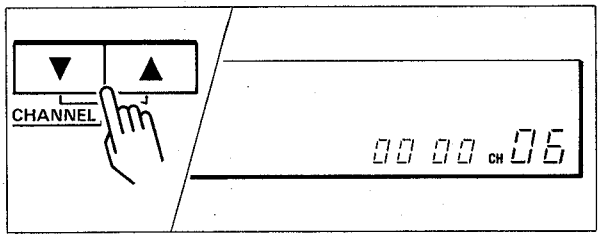


User's controls

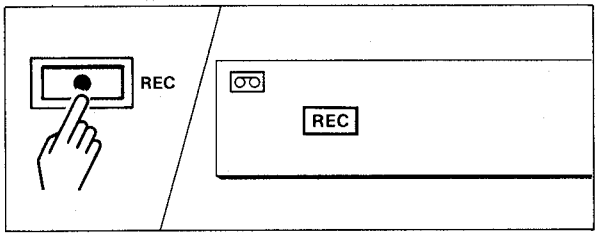
1 Insert a cassette.
Note: Be sure to check that the erase prevention tab is not missing. If it is removed, the VTR goes into playback mode automatically.



2 Select the channel to be recorded by pressing the CHANNEL select buttons.

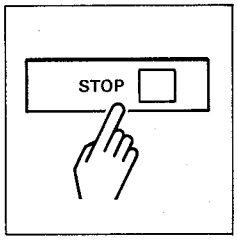


3 Press the RECORD button.



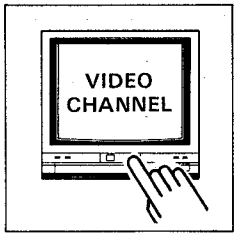
Now, recording starts.

4 After finishing recording press the STOP button.



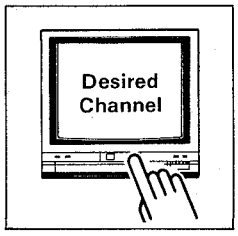
To view same programme while recording

You can view same programme while recording by merely selecting the video channel (described on page 7) with your TV channel button.



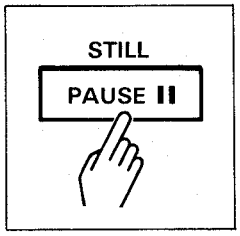
To record one programme while viewing another

You can record one programme while viewing another by merely selecting the channel with your TV channel button. The recorded programme can be viewed later at your convenience.



Notes:

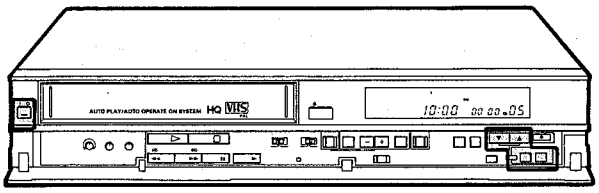
1. If you wish to avoid recording unwanted material, press the PAUSE button. Press the PAUSE button again to release the pause mode. To prevent tape damage, do not leave the unit in the pause mode for more than 5 minutes.



2. If you want to change channels while in the record mode, press the PAUSE button then select the desired channel.
   Press the PAUSE button to release the pause mode.
3. If the cassette in the VTR has its safety tab removed, the VTR will eject it when the RECORD button has been pressed.
4. Your TV does not have to be on to make a recording because the VTR records TV programmes without the aid of your TV. Its only use is for monitoring.

INSTANT RECORDING TIMER (IRT)

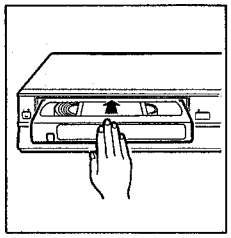
Instant Recording Timer allows you to make simplified timer recording without using the programme timer. There are two simplified methods as explained below.



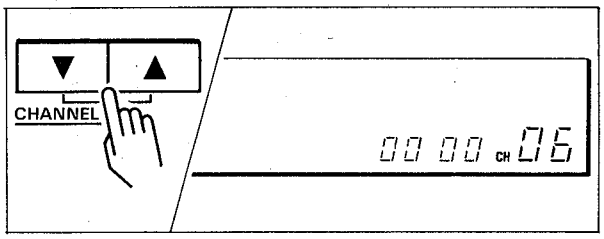
User's controls

FOR IMMEDIATE RECORDING

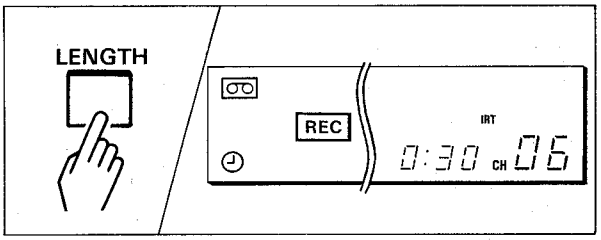
1 Insert the cassette (one with an intact erase prevention tab) into the cassette compartment.



2 Press CHANNEL select button to select the channel to be recorded.



3 Press LENGTH button to set the timer to "0:00". Then press LENGTH once again to indicate the recording time on the display.



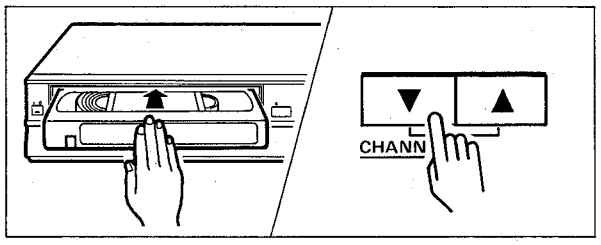
The time changes in hours and minutes in the order of 0:30, 1:00, 1:30, 2:00, 3:00 and 4:00 every time the button is pressed. Recording starts when 0:30 is displayed. During recording, the remaining time is displayed.

4 At the end of recording the display reads 0:00; the VTR will automatically stop recording.

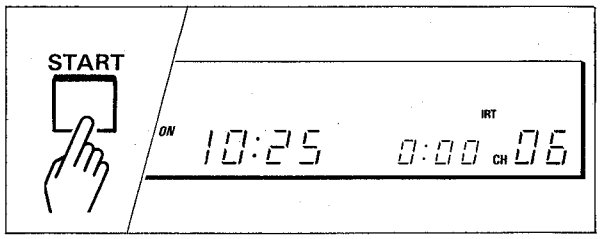
Note: The IRT feature does not operate during play and after a programme timer recording has started. During rewind mode, the IRT recording will automatically start after the tape is rewound fully to the end.

FOR SIMPLIFIED TIMER RECORDING

1 First perform Steps 1 and 2 of "FOR IMMEDIATE RECORDING".

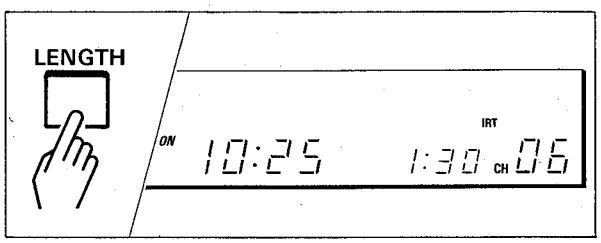


2 Press the START button to select the start time.



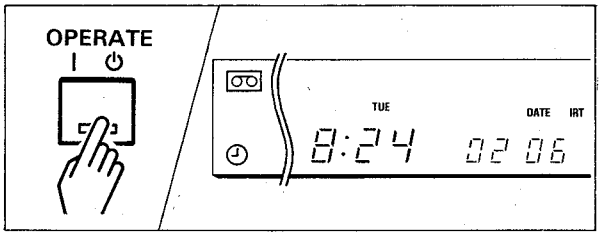
Holding the button down will increment the start time in 10-minute steps. Each time it is pressed will increment the start time by 1 minute.

3 Press LENGTH button for the recording time.



The counter display is reset to hours and minutes in the order of 0:00, 0:30, 1:00, 1:30, 2:00, 3:00 and 4:00 every time the button is pressed.

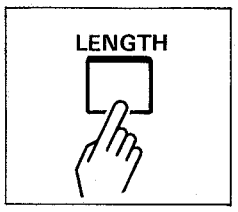
4 Press OPERATE switch off.



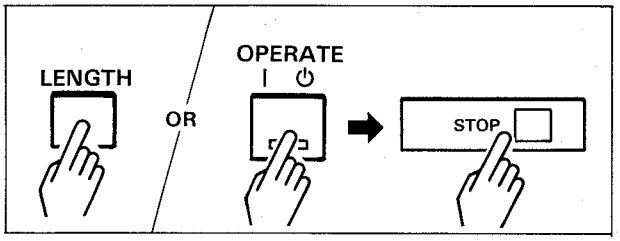
The "⏲" indication will appear on the Display. The recording will start at the time you have selected and will automatically stop when the recording time display reads "0:00".

Notes:

1. The recording time can be extended any time during IRT by pressing LENGTH button . The recording time display will be reset to 0:30, 1:00, 1:30, 2:00, 3:00 or 4:00 as selected.



2. To stop the VTR during IRT, press the LENGTH button until the recording time display reads 0:00, or press the OPERATE switch then the STOP button within ten seconds.

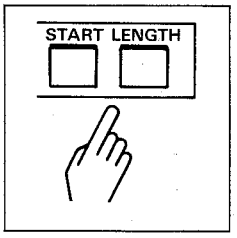


3. To change the IRT programme, the previous information must be first cleared.
4. If IRT and the programme timer recording overlap, the former will override the latter.

To recall the IRT programme

Press START or LENGTH button for recalling the start time and the recording time. In about 8 seconds the displays return to the present time of day.

Note: To recall the start time or the recording time, press LENGTH button only once. Pressing more will change the recording time and cause a need for resetting.

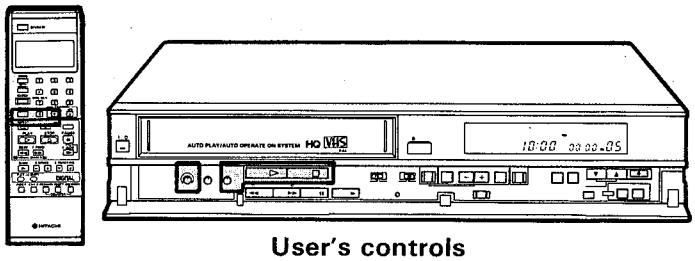


To cancel IRT programme

Press LENGTH button as many as may be required to indicate "0:00" on the display. After approximately 8 seconds the display will return to the present time of day, and IRT has been now cleared.

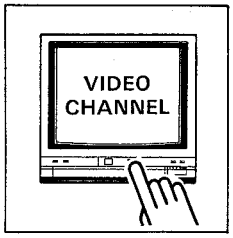
Note: OPERATE switch may be on or off.

PLAYBACK

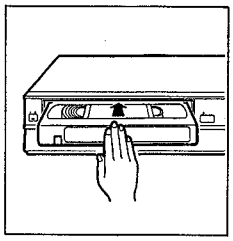


User's controls

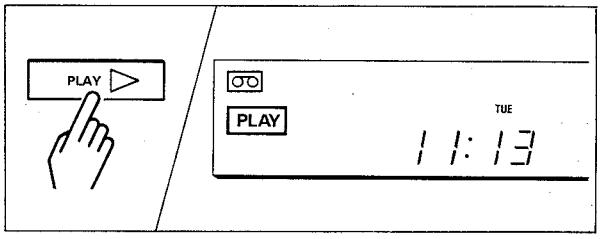
1 Turn the TV set on and select the video channel.



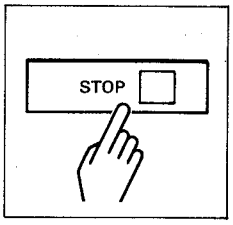
2 Insert the cassette.
Note: When the cassette (with erase prevention tab removed) is loaded, the playback starts automatically.



3 Press the PLAY button.

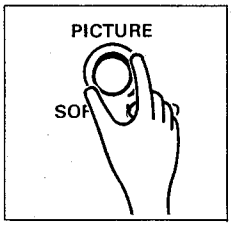


4 Press the STOP button to stop playback.



Picture control adjustment

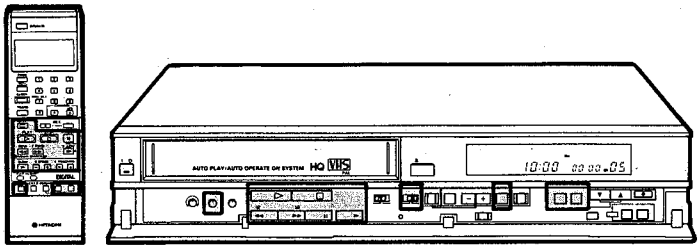
Control the picture as you like (soft or hard).



Tracking control adjustment

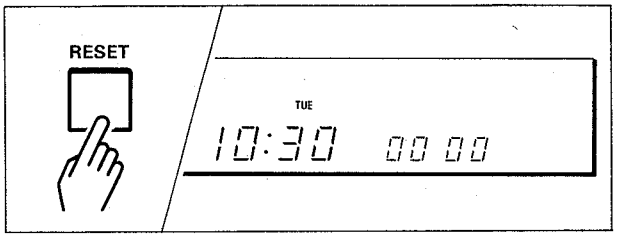
When playing prerecorded tapes or those recorded on units other than your own, black and white streaks may appear on your TV screen. If this occurs, adjust the TRACKING control until the streaks disappear. When playback of this particular tape is over, readjust the TRACKING control to its original position. The original position is normally in the center position.

SPECIAL CHARACTERISTICS



Tape counter

This indicates the amount of video tape transported as a number.
Press the RESET button to set the counter reading to "0000" when starting recording or playing back.

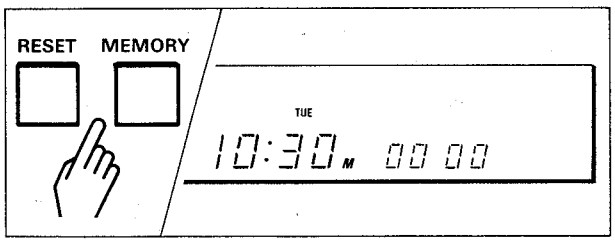


Note the number on the Tape counter at the beginning and end of each programme you record. This will allow you to use the counter to find the desired programme later.

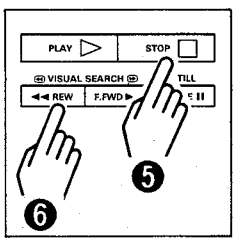
Counter memory function

This is useful if there is a section of tape you want to view immediately after recording or you want to return to the same point several times.

1. Begin recording or playing back a tape.
2. At the point where you want playback to begin, reset the tape counter to "0000" by pressing the RESET button.
3. Press MEMORY button, and the "M" appears on the Display.



4. Continue to play or record.
5. Press the STOP button when recording or playback finishes.
6. Press the REWIND button.

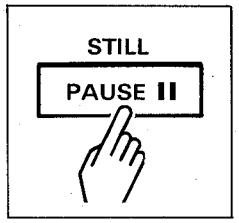


The tape will automatically stop at the pre-selected "0000" position.
Actually, so that you won't miss the very first part of the programme to be viewed, the tape will stop slightly prior to "0000" at approximately the "9997" position.

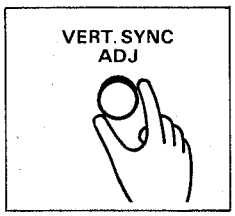
Note: The counter memory function will also operate during fast-forwarding mode.

Still playback

Press the PAUSE button to stop the picture on the screen during playback.
During still playback, press the PAUSE button to return to normal playback or the STOP button to stop the tape.



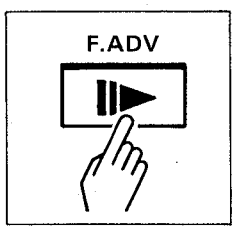
Notes:



- If you see vertical shaking on the TV screen in the still playback mode, rotate the VERT. SYNC. ADJ. control behind the control door to minimize shaking.
- When the still playback mode continues for about 5 minutes, the VTR switches to the stop mode automatically to prevent damage to the tape.
- The playback picture will have some noise in the still playback mode.

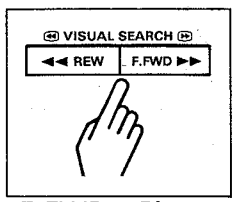
Frame advance

When you hold FRAME ADVANCE button on the remote control unit down during still playback mode, tape will be played back frame by frame. Operates only after PAUSE button has been pressed.



Visual search

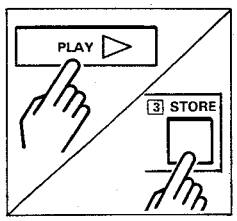
This allows you to view the picture from a recorded tape at high speed in both the forward and reverse directions.
Press the PLAY button to play a tape, then press either the VISUAL SEARCH button REW or F.FWD. Pictures can be viewed at high speed in either the forward or reverse direction.



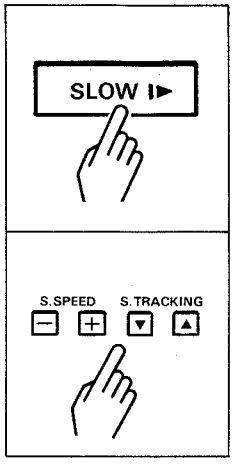
Note: The playback picture will have some noise in the visual search mode.

Auto endless play

Press the PLAY and STORE buttons simultaneously; you can play the tape from the beginning to the end repeatedly. To stop endless play, press the EJECT or POWER button.



Slow function



Press SLOW button during playback, and the tape is played back at slow speed.
Then use the SLOW SPEED (S.SPEED) buttons on the remote control unit to vary the playback speed.

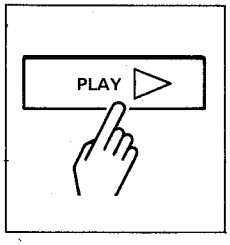
Notes:

- When noise appears in the slow playback pictures, it can be removed by pressing the SLOW TRACKING (S.TRACKING) buttons on the remote control unit. Removing the noise in the slow playback also lets you enjoy a noisefree picture in still playback.
- When the slow playback mode continues for about 5 minutes, the VTR switches to the play mode automatically.

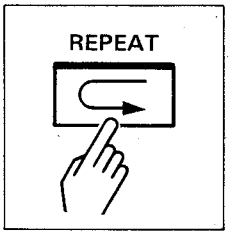
Repeat function

Use this function to repeat the scene you have just viewed during playback.

1 During playback, press PLAY button at the scene where you want the repeat of the playback to start. The playback continues.



2 Press REPEAT button on the remote control unit. The VTR enters the reverse search mode then enters the playback mode at the position where the PLAY button was pressed.



Index function

Cassette tape may be recorded using the tape indexing feature for rapid location of any section.

To record using indexing feature

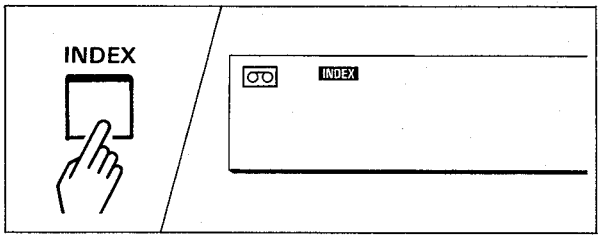
Record as usual. Each time you press the RECORD button to begin recording, an index signal is recorded on the tape.

Note: The index signal is not recorded if the PAUSE button is pressed and released during recording. Press the RECORD button from stop. If two programmes are recorded on the same channel and one immediately follows another, press the STOP button after the first programme. Press the RECORD button to resume recording. This inserts an index signal at the beginning of each programme.

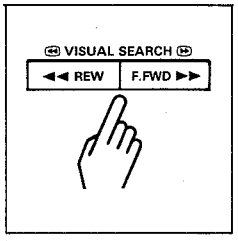
To locate a programme using indexing feature

1 Turn on VTR and insert a cassette which was recorded using the tape indexing feature.

2 Turn on INDEX button on the remote control unit (Indicator lights).

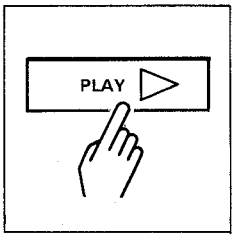


3 Press the REW or F.FWD button. The tape will rewind or fast forward until an index signal is reached. The VTR enters forward search for approximately 30 seconds. The tape will then resume rewind or fast forward until the next index signal is reached.



Note: If there is a section with no signal recorded on the tape during fast forward or rewind, the index function may not work properly.

4 Press PLAY button when the desired programme is located.
Note: If the REWIND button is pressed during forward search, the tape will rewind until an index signal is detected.



5 To completely rewind tape, turn off the INDEX button (indicator goes off) and then press REWIND button.

Automatic rewind

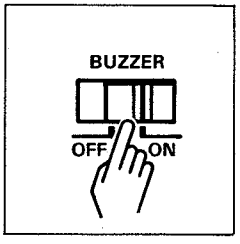
The VTR automatically rewinds the tape when the end of the tape is reached.

Rewind shut off

If OPERATE switch is pressed during rewind operation, power will be turned off automatically after the tape has been completely rewound.

Note: If the counter memory or index function is turned on, the VTR will stop rewinding and switch off at the specified position.

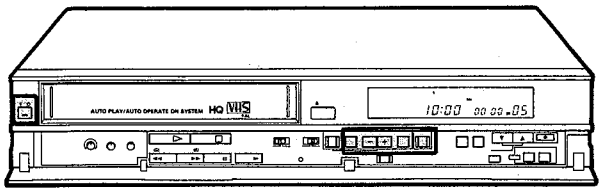
Beep sound



This VTR has BUZZER switch. When this switch is ON, a beep sound will be heard when any VTR operation button is pressed. This is a convenience allowing you to operation.
To stop beep sound, set the switch to OFF.

TIMER RECORDING

The programmable electronic clock/timer permits the unattended recording of 8 preselected programmes within a period of 1 year, including the same programme(s) repeated on every day and the same programme(s) every week. It turns the unit on and off and selects the channel automatically.



User's controls

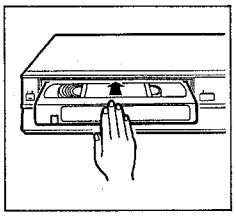
The timer can also be programmed with the remote control unit provided. See the supplement manual for more details on programming procedures with the remote control unit.

Preparations for timer recording

- Your TV does not have to be on to make a recording because the VTR records TV programmes without the aid of your TV. Its only use is for monitoring.

1 Make sure that the clock shows the present time and day correctly.

2 Insert a cassette.
Be sure to check that the record safety tab is not missing. If the record safety tab is missing, recording will not begin.

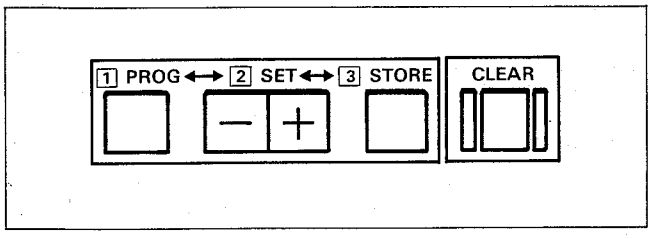


3 Programme the timer.

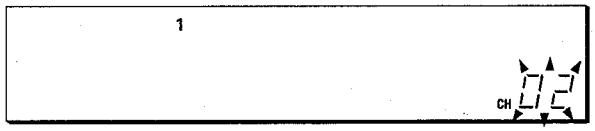
Programming the timer for unattended recording

For unattended recording the timer needs to know what **day** to make the recording, the **time to start**, the **time to stop**, and the **channel to be recorded.**

The buttons for programming the timer are in the secondary control door; PROGRAM, SET and STORE buttons. If you input erroneous information by mistake when programming the timer, press the CLEAR button and input the correct information again.



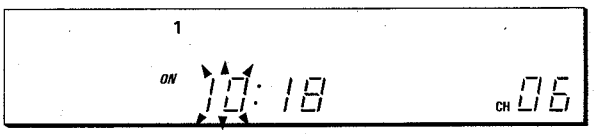
1 Press the PROGRAMME button.



An unused programme number is automatically selected from numbers 1 to 8 in numerical order and the channel number will start flashing.

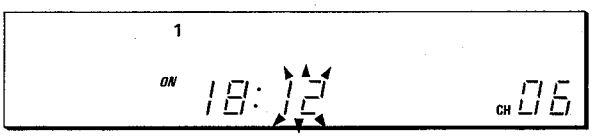
NOTE: Check the programme numbers in the display before pressing the PROGRAMME button. The timer allows up to 8 programmes to be stored, but when all programme numbers 1 to 8 are lit in the display, no programming can be performed. To input a programme at this time, clear one of the 8 programme numbers (see "To clear a programme"). When the PROGRAMME button is pressed while all the 8 programme numbers are lit, the "FUL" indicator will light to warn you. (When the BUZZER switch is ON in this state, a beep sound will be heard to warn you.)

2 Choose the channel to be recorded by pressing the SET or CHANNEL select button. Then press the STORE button. Hour starts flashing.



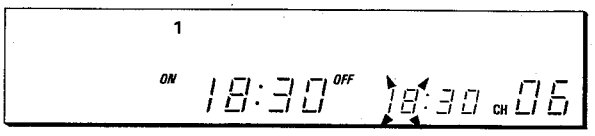
For example, above diagram shows channel 6 has been set.

3 Select the hour for recording to start by pressing the SET button (Forward or Reverse). Hold down the button to advance rapidly.
Press the STORE button after selecting the hour for recording to start.
Minutes starts flashing.



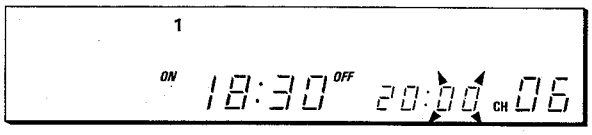
For example, the above diagram shows "18" hours has been set.

4 Select the minutes for recording to start by pressing the SET button (Forward or Reverse). Hold down button to advance rapidly. Press the STORE button after selecting the minute for recording to start. "OFF" will appear and hour starts flashing.



For example, the above diagram shows "30" minutes has been set.

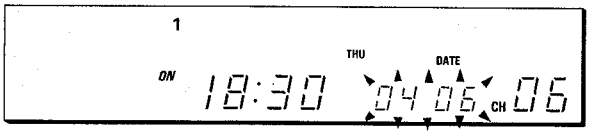
5 Select the hour and minute to stop recording in the same procedures described in steps 3 and 4.



For example, above diagram shows "20:00" has been set.

Be sure to press the STORE button after selecting the minute. The current date appears and starts flashing.

6 Press the Forward SET (+) button to select the day and month of recording.

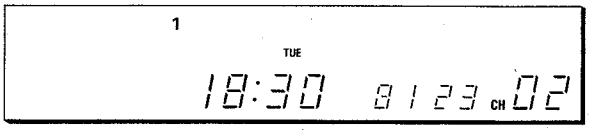


For example, above diagram shows recording on 4 of June.

Notes:

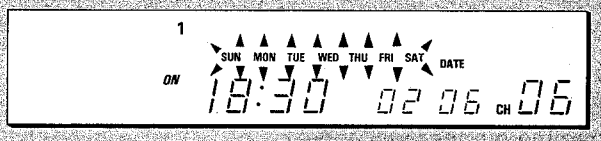
- Day of week appears automatically.
- If you want to start recording on the current day, simply press the STORE button.
- Above diagram shows to record a programme on a single day. To record a programme at the same time on every day or to record it on one certain day of each week, follow the procedure described below.

After setting the day and month press the STORE button. The programme indicator flashes and the display shows both start and stop times in a few seconds. Then display shows start time and date. Finally the display returns to normal together with lighting programme number.



NOTES:
To record a programme at the same time every day of week or to record a programme on a specified day at the same time each week, perform the following step instead of step 6 above.

To record same time every day of the week
Press the Reverse SET (−) button **once**. All day indicators light.
If you press the button twice or more, press the button until all day indicators light. Hold down the button to advance rapidly.



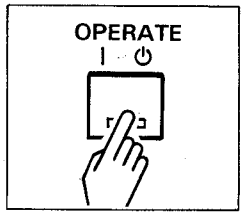
Then press the STORE button.

To record on a specified day at the same time each week
Press the Reverse SET (−) button until the desired day indicator lights along with letter "WKL". Hold down the button to advance rapidly.

Then press the STORE button.

Now, one programme has been completed.

7 Turn off the OPERATE switch. The "⏲" indicator will come on.

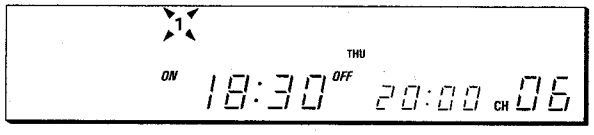


Notes:

1. If the erase prevention tab is removed, the cassette is ejected automatically and "⏲" indication will flash. Stick a piece of cellophane tape over the erase prevention hole on the cassette to enable recording.
2. The "⏲" indication will flash, if a cassette is not inserted.

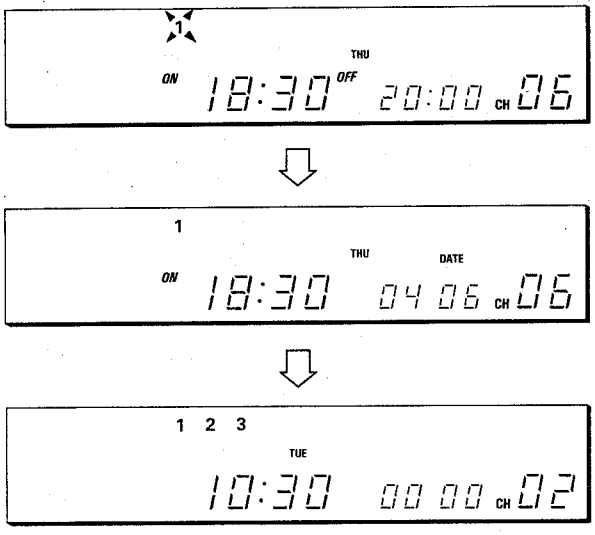
To clear a programme

1 Press the Forward SET button (+) until a programme number (and start/stop times) to be cleared appears.



2 Press the CLEAR button.
The display returns the clock time display and the cleared programme number disappears.
Be sure to press the CLEAR button while the display shows the start/stop times or start time/start date. The programming does not clear if the CLEAR button is pressed when the display returns the clock time display.

To check programming
Press the Forward SET button (+).
The programme indicator "1" flashes. If the programme No. 1 has been already programmed, both start and stop times are displayed. After a few seconds the display shows start time and start date. The display then automatically returns to the present time of day. When the clock display reappears, press the Forward SET button (+) again to check the next programme. If that programme number has not been used, only programme number will appear.



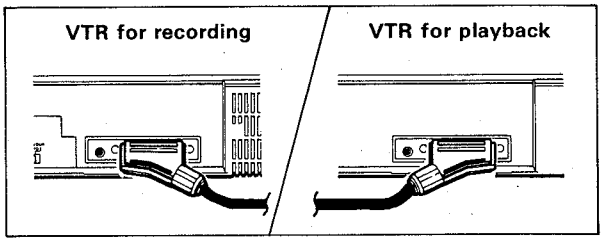
Programming errors
If programmes overlap, the VTR will select the programme with the earliest start time. When that programme is over, the VTR will switch to the next programme. If the start times are the same, the VTR will select the programmes in numerical order.

NOTE: If a power failure occurs, the programmed information will be maintained. However, if the power failure continues for 15 minutes or longer, the present time will be erased.
Set the clock correctly.

TAPE DUBBING

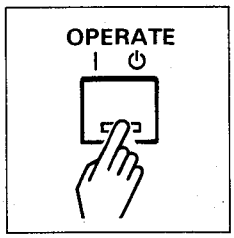
Hitachi Video cassette recorder allows you easy recording from another VTR by connecting 21-PIN EURO jack located on the rear panel of the VTR. This connection permits easy tape reproduction.

1 Connect a second VTR to this VTR.

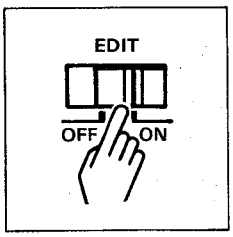


In this case, the TV must be connected to RF OUT of VTR.

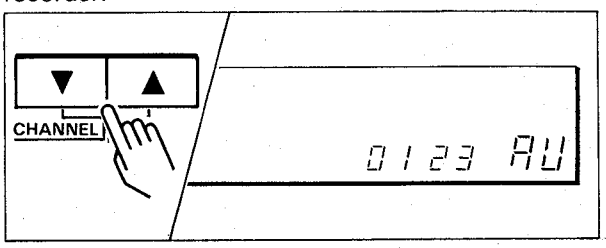
2 Switch both VTRs and TV on.

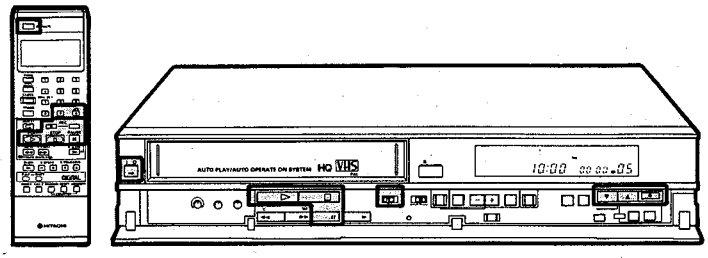


3 If you use this VTR for playback, set the EDIT switch to ON.



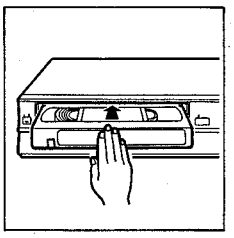
4 Press the CHANNEL select button to select AU (auxiliary input) position if using this VTR as a recorder.



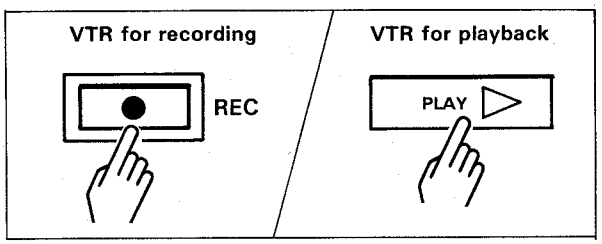


User's area

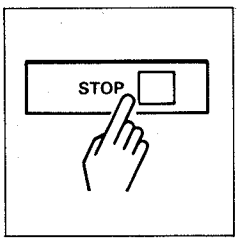
5 Insert a blank cassette into the VTR for recording, and source cassette into the playback VTR.



6 Press the RECORD button on recording VTR and PLAY on playback VTR.

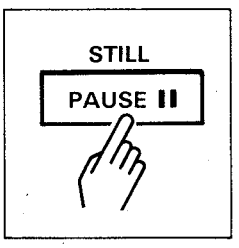


7 To end tape dubbing, press both STOP buttons.



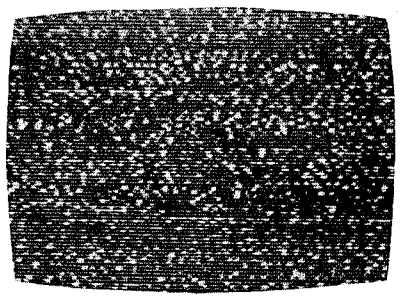
To edit out unwanted material

If you want to edit out unwanted material press the PAUSE button at the appropriate time on the recording VTR while it is recording. Press the PAUSE again to resume recording.



MAINTENANCE

1. To maintain the optimum performance of this VTR, regular periodic maintenance is required. Your dealer will advise you further.
2. Maintenance and adjustments may not be carried out by the user. In all cases of difficulty or doubt, consult your dealer.
3. Head cleaning
   - Dirt accumulated on the video heads after a period of time may cause the playback picture to become blurred or part of the video information to be lost. This does not mean that the recorded programme has been erased but head cleaning is required which must be carried out by your dealer.
   - Under no circumstances do we recommend users to attempt to clean the video heads as this is done only effectively by removal of the top cover to gain access to the video heads and other parts which require cleaning, which would expose live conductors and present a "shock" hazard.
   - In regard to the various head cleaning tapes which are currently available on the market, these can cause damage and also reduce the operational life of the video heads if used incorrectly. Please consult your dealer as to the suitability of any cleaning aids before purchase.

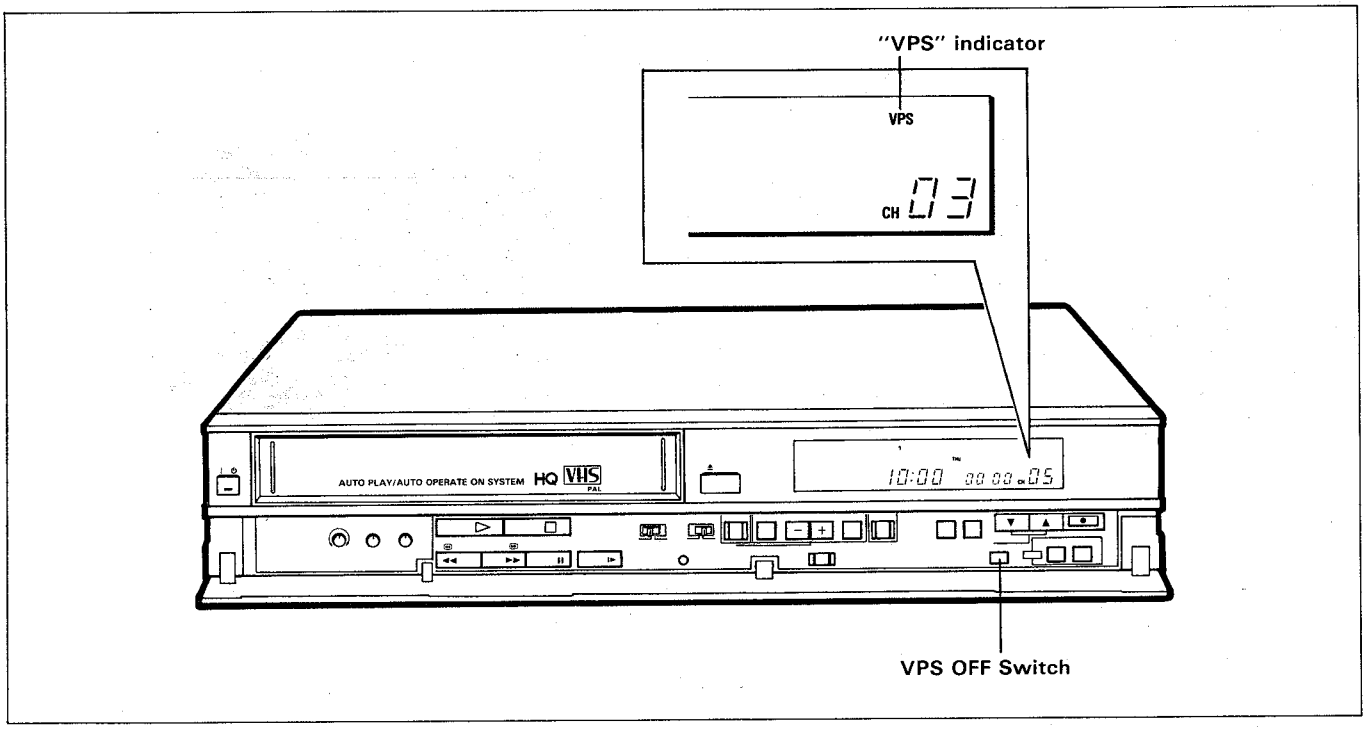


VPS (Video Programme System) FUNCTION (Only for VT-425E (VPS))

This VTR incorporates the VPS function.
If the VTR is tuned to a TV station transmitting the VPS signal, the VTR automatically takes any delay, earliness or extension of the programme into account and can record the specified programme.
For example, assume that you programme the timer for a football game on channel 8 from 19:00 to 20:45 on Saturday and the football game which is broadcast is changed to 21:00 to 23:00, the VPS function works and the VTR records the football game automatically from 21:00 to 23:00.
When the VTR is tuned to a station transmitting a VPS signal, "VPS" automatically appears in the display of the VTR.
Programming the timer for unattended recording automatically turns on the VPS function.

NOTES:

1. To switch off the VPS function, press the VPS OFF switch once during programming of the timer so the "VPS" display disappears.
   Pressing the switch again turns VPS on.
   Use the UP CHANNEL button on the remote control unit when programming the timer using the remote control unit.
2. Always programme the timer for one TV programme to record the programme with the VPS function turned on. If you programme the timer for a football game and a movie on channel 3 sequentially from 10:00 to 14:00 for example, only the football game will be recorded but the movie will not.
   In this case, programme the timer with the VPS off or input the other programme using another programme number to turn the VPS function on again.
3. When the VTR is tuned to a station transmitting a VPS signal but the signal conditions are poor, "VPS" will flash in the display.
   In this case, programme the timer with VPS turned off. If you programme the timer with VPS turned on, the VPS function does not operate normally.
4. This function can also be used during ordinary recording as an auto stop function. When the VTR is recording a TV programme transmitting the VPS signal, the VPS indicator will light automatically; press the VPS OFF button at this time. The VPS indicator will change to flashing. When the TV programme ends, the recording will stop automatically and the VTR will enter the stop mode.



PROBLEM GUIDE

PROBLEM	THINGS TO CHECK	SOLUTION
No power	• Is mains lead connected?	• Connect mains lead with AC outlet.
Timer recording is not possible.	• Is the recording time set correctly? • Is the OPERATE switch set to "OFF"? • Is the record safety tab missing?	• Set the recording time correctly. • Set the OPERATE switch to "OFF". • Place cellophane tape over missing safety tab.
RECORD mode can't be engaged.	• Is the record safety tab missing?	• Place cellophane tape over missing safety tab.
Picture is poor in playback.	• Is the TV channel selector set to the proper channel? • Is the TV fine tuning set correctly?	• For playback, the TV channel selector should be set to channel 37. • Fine tune your TV.
Noise in picture in playback	• Are Video Heads clean?	• Head cleaning is necessary.
No picture in playback	• Is the TV set to the correct channel?	• Set to correct channel. (for your video channel)
Playback picture is partially noisy.	• Is the TRACKING control set to center position?	• Adjust TRACKING control for the best picture.
Off-the-air TV programme cannot be seen.	• Is connection correct?	• Connect correctly.

SPECIFICATIONS

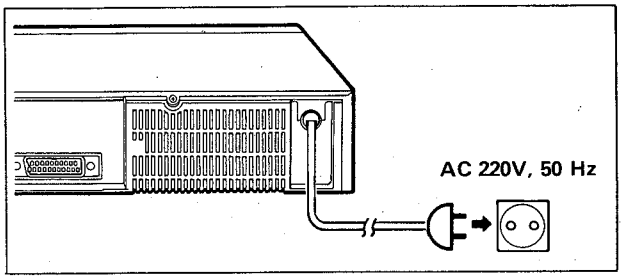
Format:	VHS PAL Standard
Recording:	Rotary Two-Head Helical Scan Azimuth Recording
Tape Speed:	23.39 mm/sec.
Tape Width:	12.7 mm
Operation Temperature:	5°C to 40°C
Video:	PAL colour (system B & G) & CCIR monochrome signals 625 lines
Recording Time:	240 min. (with E-240 cassette)
Aerial Input:	VHF channels 2 — 12 VHF channels U1 — U5 CATV channels S1 — S20 HYPER S21 — S40 UHF channels 21 — 69
RF Output:	UHF channels 37 (30 — 39 adjustable) (System G)
Video Input:	0.5 to 1.5V p-p 75 ohm Unbalanced
Video Output:	1V p-p 75 ohm Unbalanced
S/N Ratio (Video):	43 dB
S/N Ratio (Audio):	43 dB
Horizontal Resolution:	Colour 260 lines
Audio Input:	—3.8 dBm 10 Kohm
Audio Output:	—3.8 dBm 1 Kohm
Audio Frequency Range:	70 Hz to 12 kHz
Power:	AC 220V 50 Hz
Power Consumption:	29W (including timer) (VT-420E(CT)) 31W (including timer) (VT-425E(VPS))
Timer:	24 hour digital indication
Cabinet Size:	435 mm(W) x 81 mm(H) x 337 mm(D)
Weight:	6.4 kg
Accessory Included:	1 — Aerial cable 2 — Programme sheets 1 — Infrared Remote control unit 2 — Batteries

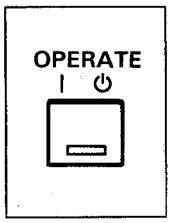
* Design and specifications are subject to change without notice.

WARNUNG

Netzstromversorgung

- **Wichtig: Netzstromversorgung nur 220 V, 50 Hz**





Mit dem an der Frontseite des Videorecorders angeordneten Betriebsschalter (OPERATE) wird nur die Stromversorgung des Videorecorders ein- und ausgeschaltet, d.h. die Zeituhr bzw. der Timer werden von diesem Schalter nicht betroffen. Die Anzeige " I " des Betriebsschalters (OPERATE) bedeutet "Ein" und " ⏻ " Betriebsbereitschaft.

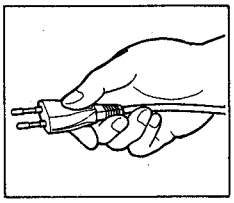
Wird der Videorecorder für längere Zeit nicht benötigt und auch nicht für Timer-Aufnahmen in Ihrer Abwesenheit eingesetzt, dann sollten auch der Netzschalter ausgeschaltet und das Netzkabel von der Steckdose abgezogen werden. Bei Durchführung von unbeaufsichtigten Timer-Aufnahmen sollten Sie daran denken, daß dafür der Fernsehempfänger nicht eingeschaltet sein muß.

- Niemals die Befestigungsschrauben lösen und die Abdeckungen entfernen. Dieser Videorecorder darf nicht vom Anwender selbst gewartet werden; wenn Wartungsarbeiten erforderlich sein sollten, wenden Sie sich bitte an einen qualifizierten Service-Techniker oder an einen Kundendienst.
- Um Feuer und Stromschlaggefahr zu vermeiden, dieses Gerät niemals Regen oder Feuchtigkeit aussetzen.
- Fernsehprogramme dürfen nur dann aufgezeichnet werden, wenn dadurch das Urheberrecht und andere Rechte nicht verletzt werden.
- Hinweis für Farbfernsehsystem
  1. Mit diesem Videorecorder können auch Fernsehprogramme der DDR aufgezeichnet und in Farbe wiedergegeben werden.
  2. Wenn die gemäß 1. bespielte Cassette auf einem SECAM- oder PAL-Videorecorder abgespielt wird, dann wird nur ein Schwarzweiß-Bild wiedergegeben.
  3. Wird eine auf einem SECAM-Videorecorder bespielte Cassette oder eine im Fachhandel erhältliche, bereits bespielte SECAM-Cassette auf diesem Videorecorder abgespielt, dann wird nur ein Schwarzweiß-Bild wiedergegeben.
  4. Dieser Videorecorder kann in Frankreich nicht verwendet werden; in Frankreich ist ein SECAM-Videorecorder zu benutzen.

VORSICHTSMASSNAHMEN

Betriebssicherheit

- Sollten Gegenstände oder Flüssigkeiten in das Innere dieses Gerätes gelangen, sofort die Stromversorgung ausschalten; das Gerät von einem qualifizierten Kundendiensttechniker überprüfen lassen, bevor es wieder in Betrieb genommen wird.
- Um das Netzkabel von der Netzdose abzutrennen, immer an dem Netzkabelstecker und niemals an dem Kabel ziehen.



Aufstellung

- Bei der Aufstellung ist zu beachten, daß die Belüftungsschlitze an der Unter-, Ober- und Rückseite des Gerätes nicht abgedeckt sind. Richtige Belüftung ist erforderlich, um Überhitzung zu vermeiden.
- Das Gerät niemals in der Nähe von Wärmequellen (wie Heizkörpern oder Warmluftauslässen) aufstellen und direkte Sonnenbestrahlung, übermäßigen Staub, mechanische Erschütterungen und Stöße vermeiden.
- Niemals Magnet oder magnetische Gegenstände in die Nähe des Videorecorders bringen, da anderenfalls das Leistungsvermögen des Videorecorders beeinträchtigt werden kann.
- Den Videorecorder immer auf einer stabilen und waagerechten Unterlage aufstellen.

Betrieb

- Kondensatbildung
  Wird z.B. eine kalte Flüssigkeit in ein Glas gegossen, dann bildet sich an der Oberfläche des Glases ein Beschlag, der mit Kondensat bezeichnet wird. Der gleiche Vorgang tritt ein, wenn der Videorecorder von einem kalten Ort an einen warmen Ort (oder umgekehrt) gebracht wird. Dabei kommt es zu Kondensatbildung an der Kopftrommel, dem wohl kritischsten Teil des Videorecorders.
  Deshalb sollte der Videorecorder für mindestens zwei Stunden nicht verwendet werden, wenn er von einem kalten in einen warmen Raum gebracht wurde, um Kondensatbildung an der Bildkopftrommel zu vermeiden.

Reinigung

- Die Oberfläche des Gehäuses nicht mit Lösungsmitteln wie Benzin, Alkohol, Farbverdünner bzw. mit chemisch behandelten Tüchern abwischen, da sonst die Oberfläche beschädigt bzw. der Überzug abgetrennt werden könnte.

Verpackung

- Das Verpackungsmaterial und der Original-Karton sind aufzubewahren, da sie für etwaigen Transport oder Lagerung wieder benötigt werden.